(γ) *The General Surface of the Skin.*—This was tested by *conflicting colour experiments.* It had been previously shown that the larvæ were sensitive during stage iii., and therefore they were covered in this stage with compartmented tubes, so constructed that the head and anterior part of the body hung in the lower chamber of one colour, while the posterior part of the body was in the upper chamber in another colour. In another method the larvæ were hung upon a vertical surface, while the head and front part of the body passed through a hole in a shelf, the vertical surface above the shelf, and the upper side of the shelf itself being one colour, while the vertical surface below the shelf and the lower side of the shelf were of the colour tending to produce the most opposite effects. The result of all these experiments was to show that the colour influence does act on some element of the larval skin, and that the larger the area of skin exposed to any one colour the more does the pupa follow its influence. Parti-coloured pupæ were not obtained, thus perhaps pointing towards the action of the nervous system rather than towards the direct action of light on or through the skin itself.

6. *The Nature of the Effects Produced.*—The colouring-matter of the dark pupæ is contained in a thin superficial layer of the cuticle; below this is a thicker layer divided into exceedingly delicate lamellæ, between which fluids are present, and the latter form the thin plates which, by causing interference of light, produce the brilliant metallic appearance. The thinner upper layer, being dark, acts as a screen in the dark pupæ. Precisely the same metallic appearances are caused by the films of air between the thin plates of glass which are formed on the surface of bottles long exposed to earth and moisture. Both have the same spectroscopic characters and the same transmitted colours (complementary to those seen by reflection). The brilliancy of the cuticle can be preserved in spirit for any length of time; it disappears on drying, but can be renewed on wetting (this had been previously known), and the colours are seen to change during the process of drying, and when the cuticle is pressed, for the films are thus made thinner. The same lamellated layer exists in non-metallic pupæ of other species, and is used as a reflector for transparent colouring-matter contained in its outer lamellæ. Thus the structure which rendered possible the brilliant effects due to interference probably existed long before these special effects were obtained, and was used for a different purpose.

7. *The Biological Value of the Gilded Appearance.*—It is probable that the gilded pupæ of Vanessidæ resemble glittering minerals such as mica (which is very common in many places); their shape is very angular, and like that of minerals: conversely the gray pupæ resemble gray and weathered rock-surfaces, and the two conditions of rock would themselves act as a stimulus for the production of pupæ of corresponding colour. The power was probably gained in some dry hot country, where mineral surfaces do not weather quickly. Once formed, it may be used for other purposes, and in certain species is probably a warning to the enemies that the insect is inedible. It is interesting to note how the Vanessidæ, primarily coloured so as to resemble mineral surroundings, are modified for pupation on plants. Thus *Vanessa Io* has a green form which is produced among leaves; *V. atalanta* has no green form, and spins together the leaves for concealment, but both these species commonly pupate freely exposed on mineral surfaces; *V. urticæ* has neither the green form nor the habit of concealment, and it has a strong disinclination to pupate on its food-plant, as many observations concurred in proving.

III. *Experiments upon Vanessa atalanta.*—This species was also made brilliantly golden or dark-coloured by the use of appropriate surroundings in the larval condition.

IV. *Experiments upon Papilio machaon.*—This species, like *P. polydamus* (Fritz Müller), has no power of being influenced by surrounding colours. A brown pupa was obtained on the food-plant, and many green ones upon brown twigs, &c. It is possible that the amount of shade may determine the formation of the dark pupa irrespective of colour, or that less healthy and smaller larvæ may produce the brown form, just as diseased Vanessa larvæ produce gilded pupæ.

V. *Experiments upon Pieris brassicæ and P. rapæ.*

1. *Effects of Colours.*—*Black* produced dark pupæ, and the greater the illumination the darker the pupæ (*P. rapæ*), this result being the reverse of that obtained with *V. urticæ*; *white* produced light pupæ, and the greater the illumination the lighter the pupæ (*P. rapæ*); *dark red* (*P. brassicæ*) produced dark pupæ; *deep orange*, in both species, produced very light pupæ of a green colour; *pale yellow* and *yellowish green* produced rather darker pupæ than the orange; *bluish-green* produced much darker pupæ; while *dark blue* produced still darker pupæ (*P. rapæ* only). Hence there is a remarkable and sudden fall, followed by a slow and gradual rise in the amount of pigment formed as the light from various parts of the spectrum from red to blue predominates in the reflected rays which fall on the larval surface. But their effects on the formation of superficially placed dark pigment are accompanied by changes affecting the formation of greens and yellows, &c., in the deeper sub-cuticular tissues. Hence the results of any given stimulus are exceedingly complicated.

2. *Other Experiments.*—It was shown by the method described above that the ocelli are not sensitive in this species, and by similar transference experiments it was proved that the influence acts on the larva and not on the pupa itself.

VI. *Experiments upon Ephyra pendularia.*—In this genus of moths the exposed pupæ are often green and brown in different individuals, but these colours follow the corresponding tints of the larvæ, and therefore cannot be influenced unless the latter themselves were changed, and such susceptibility in the larval state has not been proved for this genus. This is the only known instance of a constant relation between the larval and pupal colours.

VII. *Experiments upon the Cocoon of Saturnia carpini.*—It was found that the larvæ spin dark cocoons in black surroundings, but white ones in lighter surroundings.

NOTES

THE principal officers for the Manchester meeting of the British Association, to begin on August 31, under the presidency of Sir Henry Roscoe, have now been selected. The following will be the Presidents of the various Sections:—Section A, Mathematics and Physics, Sir Robert S. Ball, Astronomer Royal for Ireland; B, Chemistry, Dr. Edward Schunck, F.R.S.; C, Geology, Dr. Henry Woodward, F.R.S.; D, Biology, Prof. A. Newton, F.R.S.; E, Geography, General Sir Charles Warren, R.E., G.C.M.G.; F, Economic Science, Dr. Robert Giffen; G, Mechanical Science, Prof. Osborne Reynolds, F.R.S. For Section H, Anthropology, a President has not yet been chosen. One of the public lectures will be given by Prof. H. B. Dixon, who has taken as his subject "The Rate of Explosions in Gases." The lecture to the working classes will be given by Prof. George Forbes. It is expected that, socially, the Manchester meeting will be one of the most brilliant ever held. A very large sum has already been subscribed, and liberal arrangements are being made for excursions and other entertainments.

THE trustees of the fund established by Mrs. Elizabeth Thompson, of Stamford, Connecticut, "for the advancement and prosecution of scientific research in its broadest sense," having accumulated income available for grants, desire to receive applications for appropriations in aid of scientific work. This endowment is not for the benefit of any one department of science, but it is the intention of the trustees to give the preference to those investigations which cannot otherwise be provided for, which have for their object the advancement of human knowledge, or the benefit of mankind in general, rather than to researches directed to the solution of questions of merely local importance. Applications for assistance from this fund should be addressed to the Secretary of the Board of Trustees, Dr. C. S. Minot, Harvard Medical School, Boston, Mass., U.S.A., and should be accompanied by a full statement of the nature of the investigation, of the conditions under which it is to be prosecuted, and of the manner in which the appropriation asked for is to be expended. The new grants will probably be made in May next.

In consequence of the date fixed for the celebration of the Queen's Jubilee, the Senate of the University of London have deemed it necessary to change the time of holding the ensuing Matriculation Examination from the week beginning Monday, June 20, to the preceding week beginning Monday, June 13.

In his annual Report for the year 1886, Mr. H. B. Medlicott, Director of the Geological Survey of India, explains how it happens that Bengalis have not hitherto been employed in connection with his department. The Survey, he points out, has no duties of a mechanical nature to which, and through which, it would be possible to break in the uninitiated. Its work is strictly scientific, and requires the constant exercise, upon scanty data, of an independent, conscientious, and sober judgment. Now, Mr. Medlicott holds that Bengalis have not yet shown that they are fit for such work as this. "In Bengal," he says, "the word of knowledge has been preached for the last two generations, but in no single case has it found the needful germ in which it might come to maturity and bear fruit in original scientific work; it seems only to develop a more obnoxious kind of weed—words of science without substance. In the medical and engineering services they have for long had like teaching and opportunities to those from which Darwin, Huxley, Tyndall, and a host of others have arisen, but of like result in Bengal there is no symptom even. For a still longer period the practical results of the new knowledge in the shape of material progress have been displayed with ever-increasing energy from the West, but neither has this awakened in the Oriental mind a a power to do likewise. Of imitation there is no lack, but of creative power there is no sign. If this is not a demonstration on the part of the Bengali of his ineptitude for science, evidence counts for nothing. He would do well to take it to heart, if by any means he may correct his failing. Meanwhile, even if there were not particular evidence to confirm it, I hold this as sufficient warrant for objecting to the appointment of natives to the slender staff of the Geological Survey."

Mr. A. Lawrence Rotch, the proprietor of the Blue Hill Meteorological Observatory in the United States, has recently issued a pamphlet giving an account of the foundation and work of the observatory. According to the *American Meteorological Journal*, the station on Pike's Peak, 14,000 feet above the sea, is of problematic value to meteorology, whereas "the Blue Hill Observatory, only 635 feet above the sea, and much younger, has already been of considerable meteorological service."

Some time ago we referred to the fact that experiments were being made at Fort Scott in connection with the manufacture of sugar from Sorghum. A report on these experiments was lately presented to the U.S. Department of Agriculture by Mr. H. W. Wiley, to whom the conduct of the work was intrusted. The results were very discouraging, and the failure is attributed by Mr. Wiley to the following causes:—(1) Defective machinery for cutting the canes and for elevating and cleaning the chips and for removing the exhausted chips. (2) The deterioration of the cane due to much of it becoming over-ripe, but chiefly to the fact that much time would generally elapse after the canes were cut before they reached the diffusion battery. The heavy frost which came on October 1, 1886, injured the cane somewhat, but not until ten days or two weeks after it occurred. (3) The deteriorated cane caused a considerable inversion of the sucrose in the battery, an inversion which was increased by the delay in furnishing chips, thus causing the chips in the battery to remain exposed under pressure for a much longer time than was necessary. The mean time required for diffusing one cell was twenty-one minutes, three times as long as it should have been. (4) The process of carbonatation, as employed, secured a maximum yield of sugar, but failed to make a molasses which was marketable. This trouble arose from the small quantity of lime remaining in the filtered juices, causing a blackening of the syrup on concentration, and the failure of the cleaning apparatus to properly prepare the chips for diffusion. With regard to the future, Mr. Wiley is of opinion that the chief thing to be accomplished is the production of a Sorghum plant containing a reasonably constant percentage of crystallisable sugar.

Mr. Hennessy, of the Indian Survey, to whom, as we have already announced, the Government of the Straits Settlements applied to aid in a survey of the latter territory, has declined the appointment offered him. *Indian Engineering* observes that as the size and population of the Straits do not come up to those of an Indian district, and as the colony has already a Surveyor-General, a Deputy Surveyor-General, several Assistant Surveyors-General, with a full complement of subordinates, as well as a Special Commissioner of Lands, there must be something wrong when another surveyor from India is required in order to carry out a satisfactory survey. The circum stance appears to require some explanation.

On December 10, a volcanic eruption of great violence took place in Mount Tarumai in Yezo. Ashes continued to fall for several hours in the vicinity of the foot of the mountain, and on the neighbouring coasts, and even after this had ceased the underground disturbances continued. On December 13 the eruption recommenced, and lasted for four days. A large slip occurred on the side of the volcano, an area of about 10,000 feet square being affected, and stones and other debris fell so thickly as to change the configuration of the sea-shore to some extent. Previous eruptions, according to Prof. Milne's work on the volcanoes of Japan, occurred on February 8, 1874; October 7, 1883; January 4, 1885; and April 21, 1886.

On March 15 a strong shock of earthquake passed through Mandalay, perceptibly moving buildings and trees. No damage occurred.

On the 9th inst. Mr. W. A. Carter lectured to the Croydon Natural History Society on "Marine and Fresh-water Fishes." Mr. Carter stated that fish have the power of influencing each other by sounds and action, and in support of this assertion he described the movements of a shoal of carp in a pond. He had observed them following the lead of a single congener, which conducted them to a quantity of food a considerable distance off. Referring to fish monarchs, the lecturer said he had noticed that certain freshwater fish, such as the trout, were subservient to a ruler, which might be seen swimming at the head of his tribe, as might also certain marine forms, such as herring and bass.

The new gun-powder melinite has already begun its work of destruction. Some days ago a bomb filled with this explosive agent exploded by accident in Belfort arsenal, killing six persons, and severely wounding eleven.

A DINNER was lately given to Prof. de Lacaze-Duthiers by some forty or fifty of his pupils, who also presented him with a magnificent engraving of his own likeness. This was a well-deserved tribute of admiration for the good and useful work done in the department of zoology by Prof. de Lacaze-Duthiers. He has done great service to students of natural science by his personal labours, by the establishment of the two marine zoological stations of Roscoff and Banyuls-sur-Mer, and by the founding of the *Archives de Zoologie Expérimentale*.

THE zoological station of Cette, on the Mediterranean coast, founded by Prof. Sabatier, of Montpellier, has been recently attached to the École Pratique des Hautes Études. Cette is a very interesting place for zoologists, owing to the abundance of the fauna and its variety.

THE laboratories of the Paris Medical School will soon—that is, in the course of the spring or summer—be transferred to new buildings in front of the Medical School. The present laboratories are ugly and unhealthy.

SOUTHAMPTON, we are glad to see, is anxious to possess a University College of its own. On Wednesday, the 9th inst., a public meeting, over which the Mayor presided, was held to express the general opinion on the subject, and resolutions were unanimously carried in favour of the scheme. In one of these resolutions it was stated that, in the opinion of the meeting, "The Hartley Institution is admirably fitted, and has high claims, to form the nucleus of a University College for Southampton and the surrounding district."

SIR JOSEPH WHITWORTH'S will, dated December 1884, has now been proved. He leaves two hundred shares in Sir Joseph Whitworth and Company (Limited) to the Owens College, Manchester; eighty shares to the Institution of Civil Engineers, London; and forty to the Institution of Mechanical Engineers. By his will, after making certain bequests, he left the residue of his estate to the School Boards of Manchester, Salford, and Stockport, and to the Science and Department, South Kensington; but by codicils added last year he revokes his bequests to the School Boards and South Kensington, and leaves all his real estate and the residue of his personal estate to his executors and trustees absolutely for their own use and benefit, but in confidence that they will make such dispositions of his property for educational purposes as they know that he would have wished made.

WE regret to announce the death of M. Alexander Borodin, Professor of Chemistry at the Medico-Surgical Academy at St. Petersburg, and one of the most eminent Russian musical composers. He died on February 27.

THE death is announced of Dr. Gustav Heinrich Kirchenpauer, first Burgomaster of Hamburg, and a well-known naturalist. He died on March 4.

A DECREE has been signed by the King of Italy by virtue of which a new and complete edition of the works of Galileo will be published at the cost of the State. The Minister of Education, with the assistance of some eminent professors, will superintend the publication, which will fill twenty quarto volumes of 500 pages each.

BY the investigation of forty-two large North German lakes, the well-known zoologist Dr. Otto Zacharias has proved that the lower fauna occupies an intermediate position between that of the Scandinavian and that of the Swiss and Italian freshwater basins. Since it is supposed that during the Ice epoch gigantic glaciers stretched from the north of Europe to the foot of the Riesengebirge, it is interesting to learn that the North German lakes contain a number of lower Crustaceans that, till now, have only been found in Scandinavia.

THE Academy of Sciences at Berlin has granted the following sums for the furtherance of zoological research:—75*l.* to Dr. Karl Brandt (Königsberg) for investigations on Radiolaria; 50*l.* to Prof. Ludwig (Giessen) for the continuation of his work on Echinoderms; 100*l.* to Dr. Heinicke (Oldenburg) to continue his researches on the varieties of the herring. Besides these sums, 1950*l.* has been given for the printing of some important zoological works, viz. Prof. Dohrn's "Jahresbericht," Dr. Taschenberg's "Bibliothek," and Prof. Fritsch's work on "Electric Fishes."

THE total value of fish landed on the coasts of Scotland for the two months ending February 1887 was 190,068*l.*, being an increase over the corresponding period of last year of 8434*l.*

THE twenty-second volume of the Transactions and Proceedings of the Royal Society of Victoria has been sent to us. It contains the address of Prof. Kernot, the President, delivered on March 11, 1886; and among the papers are "The Atmosphere a Source of Nitrogen in Plant Economy," by Mr. E. Lloyd Marks; "Notes on some Evidences of Glaciation in the Australian Alps," and "The Cryptogamia of the Australian Alps," by Mr. James Stirling; "On an Apparatus for Utilising the Force of the Tides," by Mr. Lockhart Morton; and "On an Apparatus for Determining the Stability of Ships," by Mr. C. W. McLean.

WE have received Parts 21-25 of "Länderkunde des Erdteils Europa." The editor of this admirably illustrated work is Prof. Alfred Kirchhoff, and among the contributors are Profs. Penck, Egli, and Heim. The aim of the writers is not merely to describe the countries with which they deal, but to bring out the influence of geographical conditions upon material, political, and social progress.

IN reference to the acclimatisation of flat-fish in American waters, the latest Bulletin of the United States Fish Commission states that in April 1880 five soles sent from England reached New York, and were deposited outside Sandy Hook. In October 1881, out of a consignment of turbot and soles sent from England, three soles and six turbots survived. These were transferred to the Sheep's Head Bay. In order to ascertain whether any trace of these fish could be found, the Fish Commission in October last trawled in the vicinity of the spots mentioned, but did not succeed in capturing any flat-fish.

THE Botanical Museum of Hamburg will be rendered more generally serviceable to German commerce and industry by the addition of a commercial laboratory. For analyses and investigations a most moderate tariff has been set up.

IN an article in the *Entomologist's Monthly Magazine* for March, Mr. Herbert Goss raises the question whether *Aporia cratægi* is dying out in this country. At one time this butterfly was common in Kent, Sussex, Hampshire, Huntingdonshire, Northamptonshire, Herefordshire, Monmouthshire, and Glamorganshire. Now it has disappeared, apparently, from all these counties. Mr. Goss does not think that this can be attributed to the rapacity of collectors, and he holds that it can be accounted for only in some localities by cultivation and drainage. It seems to him more probable that the extreme scarcity or total extinction of the Black-veined White may be due to a succession of wet ungenial summers and mild winters.

THE investigations into the causes and nature of the species of elephantiasis known in Java as *beri-beri*, and in Japan as *kakké*, which have been conducted at Acheen, in Sumatra, by a medical officer delegated by the Japanese Government, and Dr. Cornelissen, Inspector of the Medical Service of the Netherlands India, have led to the following results: (1) *beri-beri* must be regarded as a disease produced by minute organisms; (2) these organisms are Bacilli, which bear most resemblance to the *anthrax* Bacilli, but not smaller; (3) they are found in the blood, lungs, heart, and nervous tissue of persons dying of the disease; (4) they can be reared independently; (5) the Bacilli, which can live as parasites in the human organism, can also live and multiply out of it. These facts, which are said to be established by the investigations, explain how *beri-beri* patients can infect particular places, and how healthy individuals coming from uninfected places contract the disease in infected ones.

MR. W. H. BEEBY has reprinted from the *Scottish Naturalist* some interesting notes on the flora of Shetland. They are the result of a visit of about eight days to the Shetland Islands at the latter end of July last. Four distinct districts were visited, the greater amount of time being spent in Unst. Mr. Beeby is of opinion that the flora of the Shetland Islands is well worthy of further attention. An explorer would, he thinks, be rewarded by finding plants which are at present known only in the Faroes and in Scandinavia.

THE contents of Part 2, No. 3, of vol. lv. of the Journal of the Asiatic Society of Bengal include a short paper by Dr. King, on two new species of holly from the Eastern Himalayas, but are otherwise purely entomological. Prof. Forel continues his critical examination of Indian ants in the Calcutta Museum. Mr. de Nicéville describes nine new species of Indian butterflies, chiefly from Sikkim (which are to be figured in a succeeding number). Mr. Doherty, of Cincinnati, U.S.A., communicates a paper on new or rare Indian butterflies, many of which are from the Nicobar Islands; and Mr. E. T. Atkinson, President of the Society, gives a compilation of what has been written concerning Indian Coccidæ, which may be taken as an introduction to the study of this obscure and injurious family of insects in India. The author has chiefly followed Signoret in the systematic arrangement. The collected information will prove useful in India, for some of these scale-insects have been most destructive to coffee and other plantations. Having a clue as to how and what to observe, Indian entomologists will, no doubt, soon show that legions of Coccidæ exist in India, as elsewhere, and many strange forms will be detected.

THE additions to the Zoological Society's Gardens during the past week include a Gray Ichneumon (*Herpestes griseus*) from India, presented by Mr. C. F. Hird; a Golden Eagle (*Aquila chrysaëtus*) from Scotland; a Chilian Sea-Eagle (*Geranoaëtus melanoleucus*) from South America; a Brazilian Caracara (*Polyborus brasiliensis*) from Brazil, presented by Mr. C. Czarnikow; a Bronze-winged Pigeon (*Phaps chalcoptera*) from Australia, presented by Mr. Malcolm Nicholson; two Red-crested Cardinals (*Paroaria cucullata*) from Brazil; two Cockateels (*Calopsitta novæ-hollandiæ*) from Australia, presented by Colonel F. D. Walters; two Crested Newts (*Molge cristata*), presented by Mr. Alban Doran; a Lesser White-nosed Monkey (*Cercopithecus petaurista*) from West Africa; two Blue-fronted Amazons (*Chrysotis æstiva*) from South America, deposited; a Hog Deer (*Cervus porcinus*), born in the Gardens.

OUR ASTRONOMICAL COLUMN

TELEGRAPHIC DETERMINATION OF AUSTRALIAN LONGITUDES.—A "Report on the Telegraphic Determination of Australian Longitudes," signed by Messrs. Ellery, Todd, and Russell, has recently been published by the Government of South Australia. This Report contains the final results of the operations connecting Singapore and Port Darwin, carried out in 1883 by Capt. Darwin, R.E., in concert with the Australian astronomers above mentioned. The Observatories of Melbourne, Sydney, and Adelaide were subsequently connected with Port Darwin. The preliminary results of these telegraphic longitude determinations were communicated by Mr. Todd in 1883 to Sir G. B. Airy, and published in the *Observatory* for October of that year. The longitude of Singapore adopted in forming the results given in the Report before us is that determined by Commander Green, U.S.A., in 1882, viz. 6h. 55m. 25·01s. East of Greenwich (for Capt. Darwin's station), assuming that of the Madras Observatory to be 5h. 20m. 59·42s. Hence the resulting longitudes are:—

		h.	m.	s.
Observatory,	Port Darwin	8	43	22·49
,,	Adelaide	9	14	20·30
,,	Melbourne	9	39	54·14
,,	Sydney	10	4	49·54
,,	Wellington, N.Z.	11	39	6·52
,,	Hobart	9	49	19·80

The observations for the purpose of connecting Singapore with the various points in Australia are given in sufficient detail in the Report to enable us to see that the determinations have been made with care and attention to detail, and appear to be deserving of every confidence. The New Zealand and Tasmanian results may perhaps require further correction.

COMETS AND ASTEROIDS.—Prof. Daniel Kirkwood has a brief note in the *American Journal* for January 1887, on the origin of comets, in which he points out the probability that two, at least, of recent short-period comets have had an origin in the zone of asteroids. Tempel's comet (1867 II.) has a period, inclination, and longitude of node approximately the same with those of Sylvia (Minor Planet No. 87), whilst its eccentricity is but little greater than that of Æthra (No. 132). Wolf's comet (1884 III.), before its last close approach to Jupiter, had an eccentricity which was exceeded by twelve known minor planets; its period was about 3619 days, and its mean distance 4·611, so that it would appear to have been simply a very remote asteroid. Its period was very nearly commensurable with that of Jupiter.

THE TAILS OF THE COMETS OF 1886.—Prof. Th. Bredichin has recently examined the curves of the tails of the three principal comets of last year in connection with his well-known theory as to the laws of formation of the tails of comets. The two first comets, those of Fahry and Barnard (1886 I. and II.), proved difficult to observe, the earth being nearly in the plane of the orbit of the former comet, so that the foreshortening greatly increased the errors of observations, whilst the tail of the latter was very short, and was diffused on one side. Both, however, were of the same type, the second, $1 - \mu$ being found to be equal to 1·3 for the first, and 1·9 for the second. The third comet referred to, that discovered almost simultaneously by Mr. Barnard and Prof. Hartwig, proved much more important for the purposes of Prof. Bredichin's theory, since it showed three tails. Of these the principal one plainly belonged to the first type, a value of 17·5 for $1 - \mu$ satisfying the observations very fairly. The shorter tail seen by a number of observers plainly belonged to the third type, $1 - \mu$ being very small, whilst a third tail, seen by Mr. Backhouse (NATURE, January 6, p. 224), and lying between the other two, evidently belonged to the second type.

MINOR PLANET NO. 265.—M. Bigourdan points out (*Comptes rendus*, vol. civ. No. 9) that the motion of R.A. of this body is unusually rapid, amounting to − 1m. 40s., or double the ordinary value for the other asteroids. As the planet is nearly exactly in opposition, it must be relatively near the earth, and may therefore be very advantageously employed in the future for the determination of the solar parallax.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1887 MARCH 20–26

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on March 20

Sun rises, 6h. 5m.; souths, 12h. 7m. 37·7s.; sets, 18h. 11m.; decl. on meridian, 0° 10′ S.: Sidereal Time at Sunset, 6h. 3m.

Moon (New on March 24) rises, 4h. 30m.; souths, 9h. 10m.; sets, 13h. 57m.; decl. on meridian, 15° 39′ S.